would have been obvious by one of ordinary skill in the art to combine the references to reduce noise in the Milton belt/pulley system.

The applicant respectfully traverses the above rejections. In order to make a proper obviousness rejection, all of the limitations set forth within the claims must be found or implied by the references. Here there are several limitations found within the claims that are not found within or implied by the references. First, the examiner states that Milton discloses a plurality of teeth arranged **circumferentially around** the pulley face (bold added for emphasis). However, the teeth disclosed in Milton are arranged across the pulley face and perpendicular to circumference of the pulley. As clearly shown in FIG. 2 of the present application, the teeth (114) of the present invention are arranged around the circumference of the pulley (circular bands around the pulley face). The figures and description of Milton clearly depict and describe pulley teeth that are arranged across the circumference of the pulley. Therefore, this limitation of the claims is not met by Milton as the examiner suggests.

Second, the examiner also states that Milton discloses at least one surface gap across the plurality of teeth. However, the gaps disclosed in Milton are not across the plurality of teeth, but, rather, are parallel to the teeth and interact with the gaps between the teeth rather than the teeth themselves. Therefore, this limitation of the claims is not met by Milton as the examiner suggests.

Third, the examiner indicates that Redmond discloses walls having a pulley pitch angle less than the belt groove pitch angle. Applicant disagrees. Redmond states that in a standard pulley/belt system that it is necessary for the sprocket tooth pitch to be slightly less than the belt tooth pitch. However, Redmond defines these terms differently than are

defined in the present application. As can be clearly seen by the figures in Redmond, the pulley "teeth" (12) clearly fit all the way into the belt "groove", implying that the angle of the walls of the teeth do not make the teeth too wide to completely fit into the groove (as is the case in the present invention). Redmond seems to merely disclose that the distance between the middle of the teeth is slightly different than that of the belt, which is required in the set-up described therein because of the rotation of the pulley teeth to the grooves of the belt. This set-up is completely different than that of the present invention, as described above, because the teeth are placed across the circumference of the pulley and as the pulley rotates, the teeth are forced to "step along" the grooves of the belt. In the present invention, as the pulley rotates, the pulley teeth and belt grooves remain in contact (there is no "stepping" motion). Hence, the different method of defining "pitch" in the Redmond disclosure. Nothing in the Redmond disclosure discusses the angle of the walls of the teeth grooves. Therefore, the limitation regarding the angles of the walls of the teeth and grooves is not disclosed in Redmond as the examiner suggests.

Fourth, regarding claims 2-4, the examiner indicates that it would be obvious for one skilled in the art to modify the pitch angle to obtain the optimum angle as discovering optimum ranges involves routine skill in the art. Applicant strongly disagrees with this statement and analysis. In order for the above general legal principle to apply in the present case, there must be something disclosed in the prior art that teaches or implies that changing the angle of the walls of the pulley teeth in belt/pulley systems in order to make the pulley teeth wider than the belt grooves results in lengthening belt life. If such circumstances were described in the prior art, then the amount of the angle/widening may, indeed, be within the ability of one skilled in the art. However, nothing in any of

the references cited by the examiner implies or suggests modifying the pulley teeth in such a manner. Applicant asserts that using this method to obtain this result, providing the solution to a long-felt need, is unique. Therefore, the above general legal principle does not apply in the present case.

Regarding the limitations in claims 6-10, while Milton does disclose gaps and holes as the examiner suggests, Milton does not disclose grooves **across the pulley teeth** (bold added for emphasis) as the examiner suggests. Also, Milton applies holes, grooves, etc. in order to reduce noise of the belt pulley system. As described in the present application, the grooves, holes, gaps, etc. in the present invention are used to obtain better traction between the pulley and belt by reducing hydroplaning of the belt. Because the Milton system and the present invention operate in a completely different manner (rotating across teeth versus rotating with the teeth), there would be no impetus to modify Milton to obtain the limitations of the present invention.

Finally, the Redmond reference actually teaches away from the "obvious" modifications of the references suggested by the examiner in order to obtain the limitations set forth in the present application. The Redmond disclosure indicates that to improve noise reduction and operation of the belt/pulley system described therein that the sprocket actuate pitch and the belt actuate pitch should be substantially equal (see column 1, lines 37-41). This implies that the closer the pitch angles of the teeth and pulley become, the better the operation of the belt/pulley system (which is the current thought of those skilled in the art as described in the background section of the present application). Since the present invention uses the concept of making these angles different in order to extend belt life, Redmond teaches away from the present invention.

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Based upon the above information and analysis, it should be clear that neither Milton or Redmond, nor any combination of these references, meets or implies the limitations of the present invention.

Accordingly, applicant believes that claims 1-10 are in condition for allowance and respectfully requests the examiner to withdraw all objections and rejections and allow said claims. Should the examiner need more information regarding this matter or have further suggestions regarding this application, feel free to call the undersigned at 410-586-2258.

Respectfully submitted,

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Applicant